

## FEASIBILITY ANALYSIS OF ASSESSMENT PROGRAM AND PROFESSIONAL CERTIFICATION IN ENSURING AND MAINTAINING EMPLOYEES COMPETENCE TO INCREASE VALUE OF PT KRAKATAU STEEL (PERSERO) Tbk

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*Abstract*—PT Krakatau Steel (Persero) Tbk is currently faced with the situation of business conditions characterized by raw material prices continue to rise and operational costs wastage resulting in increased cost of goods sold thus decrease the profitability of the company. Many factors can cause these problems, one of it is determined by the competence and professionalism of the employees, especially those directly related to the production line. HR competencies problems caused by the company does not have a model to ensure and maintain the specific competencies of employees who refer to job competence standards through the implementation of the competency assessment to give recognition to the professional certification/ allowances are integrated so that has an impact on the operating cost savings program (increasing the value of the company) as well as improvement specific competencies program of employees through training programs. Based on the analysis of the questionnaire influences the relationship between professional certification and organizational performance that is filled by the managements of the company's management indicated that professional certification and significantly positively related to organizational performance.

### 1. Introduction

PT Krakatau Steel (Persero) was established on August 31, 1970, in the form of steel wire factories, steel mills and steel mills profiles. On 10 November 2010, PT Krakatau Steel (Persero) managed to become a public company and listed its shares on the Indonesia Stock Exchange. Based on the summary of financial statement in 2011, the company experienced an increase in revenue, but a decline in profits as shown in Table 1-3.

Table 1-3 Statement of Income (Loss) Summary

Labai/ (Rugi) Konsolidasian (dalam Juta Rupiah) Consolidated Profit/ Loss (in Million Rupiah)	2011	2010	2009	2008	2007
Pendapatan Bersih Net Revenues	17.915.382	14.940.295	16.913.535	20.631.431	14.836.019
Beban Pokok Penjualan Cost of Good Manufacturing	(16.316.571)	(12.671.729)	(15.728.146)	(17.915.367)	(13.063.417)
Labai/ (Rugi) Kotor Gross Profit	1.598.811	2.268.566	1.185.389	2.716.064	1.772.602
Labai/ (Rugi) Operasi Operating Profit	358.571	1.026.685	25.940	1.360.388	792.733
Labai/ (Rugi) Sebelum beban (manfaat) Pajak Profit Before Tax Expense (Benefit)	1.120.867	1.387.148	488.660	740.823	497.363
(Beban/Manfaat) Pajak Tax Expense (benefit)	(98.024)	(326.281)	27.545	(277.214)	(180.843)
Labai tahun berjalan Profit for the year	1.022.843	1.060.867	496.205	463.609	316.520
Pendapatan komprehensif lain Other comprehensive income	-	-	-	-	-
Pendapatan komprehensif tahun berjalan Comprehensive income for the year	1.022.843	1.060.867	496.205	463.609	316.520
Labai yang distribusikan kepada pemilik entitas induk Total profit attributable to owner of the parent entity	1.025.018	1.062.683	494.672	459.571	313.441
Labai yang distribusikan kepada kepentingan non-pengendali Total profit attributable to non-controlling interest	(2.175)	(1.816)	1.532	4.038	3.079
Labai Bersih/ Saham Net Income/Share	65	81	39	46	31
Jumlah Saham beredar/juta Number of shares	15.775	15.775	15.775	2	2

Source : Krakatau Steel Annual Report 2011

Dominant factor that may result in waste of the operating cost is determined by the competence and inconsistencies quality of employees, especially those directly related to the production line. Considering the condition of the business situation, the company should be able to implement the operating cost savings program realized and commercialized by competent employees, therefore an activity related to the core business of PT Krakatau Steel (Persero) Tbk is needed in meeting or improving the operational cost savings by developing a program to improve employee competency through assesment and implementation of professional certification as well as a model in ensuring and maintaining the competence of employees to increase the value of PT Krakatau Steel (Persero) Tbk to form the Professional Certification Institute Krakatau Steel (LSP-KS) BNSP licensed.

## 2. Business Issue Exploration

An approach to achieve competent human resources so as to provide performance as expected the company require in-depth study of the problems of managing and enhancing HR competencies, as illustrated the Figure 2-1.

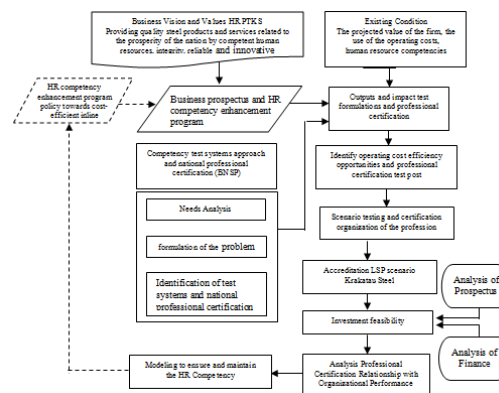


Figure 2-1 Framework

In 2012 In 2012 the economy in Asia is expected to grow significantly. Steel producers in Asia will continue to seek an increase in selling prices in the middle of the positive sentiment. Key players in the Asian steel industry are expected to increase production to adjust to the increased demand. Domestic steel prices have started to rise in the first quarter of 2012 and are expected to remain strong in line with the movement of prices in regional markets. Indonesia's steel consumption growth in 2011 is estimated at 9.7 million tons with a growth rate of 10%. Of the total of 53% of its or of 5.3 million tons is still imported, while the rest is produced domestically. Growth in steel consumption in Indonesia is mainly driven by growth in the mining, construction and automotive industries. Indonesia's steel consumption growth in the next few years still rose in line with the growth in these sectors.



Figure 2-2 Grafik Konsumsi Baja 2001-2011  
Source : Krakatau Steel Annual Report 2011

In 2011 PTKS reached bersih profit of Rp. 1.02 trillion (down 3.6% from 2010), although revenue rose by 20% from the realization in 2010. The stock Figurean development can be explained as follows:

29 Oktober 2010	Pernyataan Efektif dari BAPEPAM-LK
10 Nopember 2010	Pencatatan di Bursa Efek Jakarta
15.775.000.000 Lembar	Jumlah Saham Dicatatkan
Rp. 850 / Saham	Harga Penawaran Saham Perdana

Source : Krakatau Steel Annual Report 2011

Meanwhile, the volume and share price during the year 2011 can be seen in Figure 2-3.



Figure 2-3 Volume and Share Price of in 2011

Source : Krakatau Steel Annual Report 2011

According to Fama (1978) in Untung Wahyudi et.al, the value of the company is reflected in its stock price. The market price of a stock company formed between the buyer and the seller when the transaction occurs is called the company's market value, because the market price of the stock is considered a reflection of the true value of the company's assets. Value of a company formed through the indicator value is strongly influenced by the stock market investment opportunities. Investment opportunities can provide a positive signal about the company's growth in the future, so it will increase the price of the stock, with increasing the value of the company's stock price will increase.

Indicators that affect the value of the company include:

1. PER (*Price Earnings Ratio*), (Sutrisno, 2000 in Mohammad Usman, 2001 in Malla Bahagia, 2008)
2. PBV (*Price Book Value*), (Brigham, 1999: 92).

Under both approaches the value of the firm can be shown in Table 2-1.

Table 2-1 Company Value

No	Indicator	2011	2010
1.	PER ( <i>Price Earnings Ratio</i> )	12,92	14,81
2.	PBV ( <i>Price Book Value</i> )	0,99	1,41

It is seen that the value of the company in 2011 is decreasing than in 2010. In facing these conditions, companies prioritize projects to realize business growth and strengthen the core business remains to be funded through loans or the sale of shares. Each company has an optimal capital structure, which

is defined as the mix of debt, preferred stock, and common stock equity cost of capital which minimizes the weighted average (WACC).

Table 2-2 Statement of Financial Position

Posisi Keuangan Konsolidasian (dalam Juta Rupiah) Consolidated Financial Position (in Millions Rupiah)	2011	2010	2009	2008	2007
Aset Lancar/Current Assets	13.213.392	12.287.724	8.624.002	11.557.702	7.427.972
Penyerahan/Investasi Investment	1.625.599	310.854	136.793	34.154	34.027
Aset Tidak Lancar Lainnya/Non-Current Assets Others	6.672.571	4.985.481	4.025.253	3.782.571	3.655.025
Total Aset/Total Assets	21.511.562	17.584.059	12.786.008	15.374.427	11.117.024
Liabilitas Lancar/Current Liabilities	9.204.702	6.930.713	6.129.893	8.592.324	4.451.868
Liabilitas Tidak Lancar/Non-Current Liabilities	1.951.867	1.227.801	818.660	1.304.999	1.576.173
Total Liabilitas/Total Liabilities	11.156.569	8.158.514	6.948.543	9.897.323	6.028.041
Kepentingan Non-Pengendali/Non Controlling Interest	174.005	131.630	40.952	37.343	14.651
Ekuitas yang dapat Diatribusikan kepada Pemilik Entitas Induk/Equity Attributable to Owners of the Parent Entity	10.180.988	9.293.915	5.796.513	5.439.761	5.074.332
Total Liabilitas & Ekuitas/Total Liabilities & Equity	21.511.562	17.584.059	12.786.008	15.374.427	11.117.024
Modal Kerja Bersih/Net Working Capital	4.008.690	5.357.011	2.494.119	2.965.378	2.976.104

Source : Krakatau Steel Annual Report 2011

Table 2-3 Weighted Average Cost of Capital (WACC) in 2011

Type of Capital	Commentary	Total (IDR x1.000)	Proportion	Cost of Capital	WACC
Total Liabilities	kd: 11,3% T: 25%	11,156,569,000	51.86%	8.5 0%	4.41%
Total Equity	No. of shares: 15,775,000.000 shares. Net income : Rp. 65/ share	10,354,993,000	48.14%	9.90%	4.47%
Total		21,511,562,000	100.00%		9.18%

Source : Krakatau Steel Annual Report 2011

WACC Value of 9.18% showed 2.60% higher than the average BI in 2011 which reached 6.58%. With the WACC calculation the entire investment made by the company should be able to generate an internal rate of return greater than 9.18% in order to meet the investment feasibility. The criteria used as a basis in the project feasibility investment used financial analysis. Financial analysis is used to see the comparison between the costs and benefits to determine whether a project or investment will be profitable over the life of the project (Husnan and Suwarsono, 2000). Financial Analysis used are:

1. Net Present Value (NPV)
2. Net Benefit Cost Ratio (Net B/C Rasio)
3. Internal Rate Return (IRR)
4. Payback Periode (PP)

The decrease in corporate profits that occurred in the year of 2011 compared to 2010 due to higher raw material costs primarily due to increased procurement price of iron ore pellets and steel slab imports. Increase in this raw material cost component accounted for 66.6% of the total increase in basic cost of sales. Dealing with raw material prices continue to rise, the company should be able to perform the operation cost efficiency pursued by all employees on the production line in order to maintain product prices remain competitive. Employee's ability overall still shows waste costs for operation in all areas of plant.

Table 2-4 Usage Average Operating Cost (USD / Ton) 2010

Factory	Target	Realization	Saving / (Waste)
Direct Reduction	1256076	1698376	(442 300)
Steel Making	2093460	2830627	(737 167)
Rolling Mill	837 384	1132251	(294 867)

Source : Data processing of performance data

Based on Human Capital Management Framework that the ability of the company's human capital is reflected on leadership skills, employee performance, employee engagement, the ability to change, the ability to manage their own potential and become individuals who are efficient. Some experts explain the meaning of the human capital cited by Al Ma'ani and Jaradat (2010) which concluded that

human capital is and integration of knowledge, learning, experience, core competencies, and skills that must be owned by every employee that is within an organization or company. So that the most skilled human capital theory focuses on investments in education and some type of return on investment impact (return on investment) of the intangible asset on human capital. HR competencies which are built by Krakatau Steel refer to the concept CBHRM (Competency Based Human Resources Management). CBHRM approach in human resource management is first introduced by Prof. David McClelland in the United States. CBHRM is a pattern approach in building a reliable human resources management system by leveraging competence as a central point. Grouping of HR competencies in PT Krakatau Steel (Persero) Tbk. is divided into two characteristics, namely:

- a). Soft Competency
- b). Hard Competency

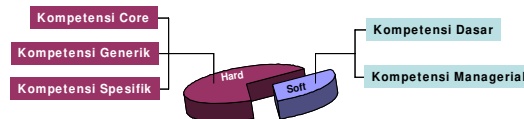


Figure 2-6 Grouping HR Competecy  
Source : Krakatau Steel Competencies Catalogue

Competency-based human resource development is done in order to deliver results in accordance with corporate goals and objectives with performance standards that have been set. Competence is concerning the authority of each individual to perform a task or make a decision in accordance with its role in the organization that is relevant to the skills, knowledge and capabilities. Competence of individual employees must be able to support the implementation of corporate strategy and is able to support any changes management made. Competence is defined (Mitrani et.al, 1992; Spencer and Spencer, 1993) as "an underlying characteristic's of an individual which is causally related to criterion-referenced effective and or superior performance in a job or situation ". Or the underlying characteristics of a person related to the effectiveness and performance of the individual in his job. Departing from the notion, an individual competence is something inherent in him which can be used to predict the level of performance. Departing from the notion, an individual competence is something inherent in which can be used to predict the level of performance. Something that is able regarding motives, self-concept, character, knowledge and skills/ expertise. Individual competence and skills in the form of knowledge can be developed through education and training, while the motive competence can be obtained at the time of the selection process. Furthermore, according to Spencer and Spencer (1993) competence can be divided into two (2) categories: competence threshold (threshold competencies) and special competence (differentiating competencies). Competence threshold are the main characteristics that must be possessed by a person in order to perform job but not to distinguish a high-performance and on average. Special competencies are factors that distinguish individuals into high and low performers.

In ensuring and maintaining the competence of its human resources, PT Krakatau Steel (Persero) Tbk, perform testing of employees in the soft competence group that includes basic competence and managerial competence and hard competence group that includes core competencies and generic competencies. The test results will feed into the development program to be followed by such employees through education and training.

Table 2-5 HR Competency Assessment

Competency Group	Types of Competence	Testing Methods
Soft competence	Basic Competency	Assessment Center
	Managerial Competence	Assessment Center
Hard competence	Core Competency	Proficiency
	Generic Competencies	Proficiency
	Specific Competencies	There Is No

There are groups of competence that exist in the hard competence group

competencies that exist in to the standard of work

competency applied in real assessment in the workplace, commonly stated as workplace assessment, so that one know whether he/ she is competent or not competent to work field, the competent will be given recognition in the form of a certificate of competency. Assessment process is known as testing system and competence professional certification. Currently certificate of competence demanded as mandatory of an industrial system that personnel performing work affecting product quality shall be competent. Under Regulation No. 13 concerning employment, that the certification of work competencies is organized by National Board for Professional Certification (BNSP) and the operational competency testing and certification of work competencies held by the Professional Certification Association (LSP) accredited through the competency test in Competency Test Site (TUK) accredited in various professional fields contained in each sector and sub-sector concerned. In recognition of someone who has passed the competency test in the form of a certificate of competency. Thus empirically that the policy as direction for the development of programs and activities for implementation of the strategy BNSP namely: Support increased industrial competitiveness, Supporting the implementation of employment and reducing of unemployment, Support the improvement of quality, productivity and competitiveness of Indonesian workers, Support the protection and welfare of workers.

Thus it can be concluded that the root of the problem is caused by the human resource competencies company do not have a model to ensure and maintain the specific competencies of employees who refers to their work competency standards through the implementation of the competency test to give recognition to the competence of certification/ professional allowances are integrated so as to give effect the operating cost savings program (increasing the value of the company) as well as improvement program specific competencies of employees through training programs.

### **3. Business Solution**

The proposed solution is to run a business and professional certification test that has been developed by the National Board for Professional Certification (BNSP) to give recognition to the competence of national and even international certification for Indonesian gradually harmonize through MRA (Mutual recognition Agreement) with the state- other countries and integrated professional allowances that have an impact on operating cost savings program (increasing the value of the company) as well as improvement program specific competencies of employees through training programs. Testing and certification system is developed by the National Board for Professional Certification (BNSP). This has reference to job competence standards, but until now Indonesia has not developed the National Occupational Competency Standards Indonesia (SKKNI) for the steel industry, the implementation of testing and certification for the profession of PT Krakatau Steel (Persero) Tbk must develop a Company Specific Competency Standards (SKKP) which refers to the first model of national competency standards. SKKP With the establishment of an institution required to maintain the SKKP, conduct testing and certification of competence and to ensure and maintain employee who has been certified, by Professional Certification form Krakatau Steel (LSP-KS) is accredited by the BNSP.

In developing countries have entered standards competency, testing and certification of the profession is a national necessity in maintaining the competence of its human resources, even in line with the implementation of free trade, professional certification to be an entry barrier to ensure that the resulting product has been made by a competent workforce. Companies in Indonesia would have to follow the agreement in the international trade, otherwise it will lose the opportunity to develop their business. Accordingly, this proposed solution will provide benefits and great value for PT Krakatau Steel (Persero) Tbk and society at large. Mechanisms of Assesment and professional certification is as illustrated in Figure 3-1.

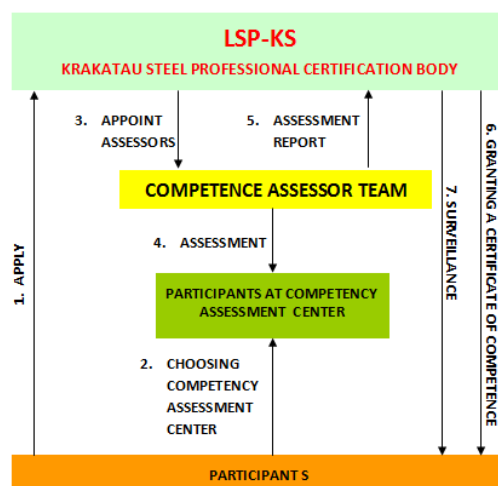


Figure 3-1 Assesment Mechanisms and professional certification

Sources : BNSP &amp; LSP-KS

As for the calculation of the investment feasibility analysis and professional certification test program are shown in the tables below:

Table 3-1 Operating Cost Savings Opportunities After Certification

Factory	Capacity (Tons / Year)	Usage Average Operating Cost (IDR / Ton)			Savings Opportunities (IDR / Year)
		Best Practice	Target	Projected Achievement	
Direct Reduction (1)	1,500,000	996 208	1256076	1.255.222	1.3 Billion
Steel Making (3)	2,450,000	1660347	2093460	2.092.037	3.2 Billion
Rolling Mill (3)	3,300,000	664 139	837 384	836.815	1.9 Billion

Source : Plant Statistic Report

Table 3-2 Projected Operating Cost Savings After Certification

Factory	Capacity (Tons / Year)	Rp. x 1,000,000									
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Reduction	1,500,000				1,281	1,281	1,281	1,281	1,281	1,281	1,281
Steel Making:											
1. CNS-1	1,000,000	1,423	1,423	1,423	1,423	1,423	1,423	1,423	1,423	1,423	1,423
2. SSP-2	850,000		1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209
3. Billet	600,000			854	854	854	854	854	854	854	854
Rolling Mill:											
1. HSM	2,000,000					1,138	1,138	1,138	1,138	1,138	1,138
2. CRM	850,000				484	484	484	484	484	484	484
3. WRM	450,000			256	256	256	256	256	256	256	256
<b>Number</b>		1,423	2,432	3,742	5,507	6,645	6,645	6,645	6,645	6,645	6,645

Table 3-3 Projected Number of Participants and Professional Certification Test

YEAR	ORIGIN OF PARTICIPANTS (PEOPLE)		NUMBER OF PARTICIPANTS	TOTAL CUMULATIVE	TUK UTILIZATION (%)
	KS	NON-KS			
2011	200		200	200	13.9
2012	200		200	400	13.9
2013	300		300	700	20.8
2014	375	200	575	1,275	39.9
2015	375	200	575	1,850	39.9
2016		300	1,140	3,290	100
2017	200	375	865	4,730	100
2018	200	375	865	6,170	100
2019	300		1,140	7,610	100
2020	375	200	865	9,050	100







Until 2012, progress testing and professional certification programs are as follows:

Table 4-2 Implementation Progress

No	Description	Achieving	Set of
1	Preparation of SKKP	420	Units
2	Assessor of competence	87	Persons
3	Registration of SKKP	69	Units
4	Licence of LSP-KS	1	Licence
5	Assessment & Profssion Certification	344	Persons

Operating cost savings in SSP-1 and SSP-2 that has been tested and certified professional in 2011 and 2012 are presented in the table below:

Table 4-3 Operating Cost Savings After Certification

Plant Area	Year /IDR	
	2011	2012
SSP-1	1,5 billion	1,43 billion
SSP-2	-	1,19 billion

SSP-1 yield in 2011 was 87% and 74% in 2012, while the yield of SSP-2 in the year 2012 by 75%. To determine the closeness or relationship that occurred between professional certification towards organizational performance, then on January 11, 2013 has been carried out data collection to 31 leaders of the company's management at the management review, by filling out questionnaires using Linkert scale of 1 to 5. Data were analyzed using SPSS Program version 16.0, which is presented in Appendix-11 with the following results:

Table 4-3 Results of Simple Correlation Analysis

Correlations			
		Sertifikasi Profesi	Kinerja Organisasi
Sertifikasi Profesi	Pearson Correlation	1	.410 <sup>*</sup>
	Sig. (2-tailed)		.022
	N	31	31
Kinerja Organisasi	Pearson Correlation	.410 <sup>*</sup>	1
	Sig. (2-tailed)	.022	
	N	31	31

\*. Correlation is significant at the 0.05 level (2-tailed).

From the results of simple correlation analysis showed that the relationship between the influence of professional certification and organizational performance are positive and significant relationship, with the level of correlation of 0.410 at a significance level of 0.022.



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